

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 05-481-B)

In application of:)	
Byung Hyuk Choi)	
)	Examiner: Sarah Purol
Serial No.: 10/568,130)	
)	Group Art Unit: 3637
Filed: November 7, 2006)	
)	Confirmation No. 9631
For: Shelf Unit For Use in Rack For)	
Communication Equipment)	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW OF REJECTIONS

Dear Sir:

Applicants respectfully request review and withdrawal of the rejections maintained in the Office Action mailed December 23, 2009 ("Office Action") and in the Advisory Action mailed February 26, 2010 ("Advisory Action").

A. Status of the Claims

Pending in this application are Claims 1-14, which include independent Claims 1, 7 and 11. The Office Action rejected Claims 1-14 under 35 U.S.C. § 103(a) as being allegedly obvious over U.S. Pat. App. No. 2004/0031767 ("Ice") in view of U.S. Pat. No. 5,697,811 ("Pickles"). Applicant's response dated February 18, 2010 supported reasons for patentability, and the Advisory Action maintained the rejections.

B. Brief Overview

Rejected claims 1-14 are directed to a shelf unit for use in a rack for communication equipment. The shelf unit comprises (a) a front body, including a pair of side panels having front and rear ends and defining a space for containing front PCBs, and connecting members mounted adjacent to the rear ends of the side panels and protruding outward from the side panels, (b) a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, the back board being detachably mounted to the rear ends of the side panels of the front body, (c) a rear body including a pair of side panels having front and rear ends and defining a space for containing rear PCBs, wherein the rear face of the

back board is configured to connect to the rear PCBs, and (d) a pair of connecting plates extending from the front ends of the side panels and having a distance therebetween so that the connecting plates are in close contact with outer surfaces of the side panels of the front body, and slots provided at the connecting plates into which the respective connecting members are fitted.

C. Deficiencies in the Rejection of the Claims

The Examiner maintained the rejection of Claims 1-14 under § 103(a) as being allegedly obvious over Ice in view of Pickles. Applicant submits that the Examiner erred in this rejection for at least the reason that Ice and Pickles do not disclose, teach or suggest each of the recited claim elements. As a result, any obviousness rejection based on Ice and Pickles alone necessarily lacks the factual underpinnings required to establish *prima facie* obviousness under 35 U.S.C. § 103(a), as set forth in MPEP § 2142. At a minimum, Ice and Pickles, individually or in combination, fail to disclose, teach, or suggest (1) “a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs” and (2) “a pair of connecting plates extending from the front ends of the side panels and having a distance therebetween so that the connecting plates are in close contact with outer surfaces of the side panels of the front body, and slots provided at the connecting plates into which the respective connecting members are fitted,” as recited in representative independent Claim 1.

i. Ice does not disclose, teach or suggest “a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs”

The Office Action states that in Ice “an exemplary embodiment of an electronic equipment enclosure is denoted generally at 100, and includes a chassis 100A, various front connectors 102, a power switch 104, indicators 106, and rear connectors 108 disposed on backplane 110 (see Fig. 4).” *Office Action*, p. 3 (emphasis in original). The Office Action goes on to state that Ice’s “single-wide functional module 200 includes a single-wide card 208, which comprises a printed circuit board (“PCB”) in at least some embodiments.” *Id.* Yet, Applicant has not been able to identify the element that the Examiner asserts is “a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs.” Rather, as shown in Figure 4, Ice’s front connectors 102 are disposed on the front wall of the chassis and are completely separate from the backplane 110, which acts as the rear wall of the chassis.

Moreover, Ice's rear connectors 108 are disposed on a single face of the backplane 110. As such, Ice fails to teach "a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs," as recited in Claim 1.

Importantly, to establish a *prima facie* case of obviousness, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." MPEP § 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Applicant understood the Examiner to assert during an interview on January 21, 2010 that certain elements of the claims were not being given patentable weight as they contained functional descriptions that did not limit the structure, namely "wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs." According to MPEP § 2114, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. And the recited limitation accomplishes this by requiring that the "front face is configured to connect to the front PCBs" and that the "rear face is configured to connect to the rear PCBs." In other words, there must necessarily be some structure present that allows the front and rear faces of the back board to connect to the respective front and rear PCBs. Accordingly, Ice does not teach (1) "a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs."

- ii. **Pickles does not disclose, teach or suggest "a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs"**

The addition of Pickles does not overcome the deficiency of Ice because Pickles also fails to disclose, teach or suggest "a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs," as recited in Claim 1. Specifically, Pickles relates to a mounting assembly for terminal end blocks. *Pickles*, Abstract. Terminal end blocks are designed to connect wires from an outside cable to the end block and then attach inside wires to the end block. *Id.* at col. 1, lines 29-35. Accordingly, Pickles' teachings are limited to connecting wires and are wholly unrelated to printed circuit boards.

Further, the Office Action states that in Pickles "a backboard 64 is used to mount the brackets 1, 3 and cable holders 51 to a wall or equipment rack." *Office Action*, p. 3 (emphasis in

original). But the fact that Pickles' backboard is mounted to a wall underscores the point that Pickles does not teach "a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs," as recited in Claim 1.

iii. Neither Ice nor Pickles discloses, teaches or suggests "a pair of connecting plates extending from the front ends of the side panels and having a distance therebetween so that the connecting plates are in close contact with outer surfaces of the side panels of the front body, and slots provided at the connecting plates into which the respective connecting members are fitted"

In addition, the Office Action does not cite either Ice or Pickles as teaching "a pair of connecting plates extending from the front ends of the side panels and having a distance therebetween so that the connecting plates are in close contact with outer surfaces of the side panels of the front body, and slots provided at the connecting plates into which the respective connecting members are fitted," as recited in Claim 1. And Applicant's review of both Ice and Pickles found no teaching or suggestion of this aspect of the claims. Furthermore, both references fail to disclose a front body and a rear body, so there is no structure in Ice or Pickles that would necessitate employing a pair of connecting plates.

iv. Examiner Failed to Establish a *Prima Facie* Case of Obviousness

The Examiner has failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a). Furthermore, the combination of Ice and Pickles fails to disclose all of the limitations of Claim 1. In addition, the Examiner failed to articulate reasoning with rational underpinnings as a basis to combine Ice and Pickles. And according to M.P.E.P. § 2142 "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). The Office Action alleges that "[t]o provide Ice with a backboard configuration as taught by Pickles would have been obvious for one having skill in the art at the time of the invention." *Office Action*, p. 3. But this assertion standing alone does not constitute "articulated reasoning with some rational underpinning" as required.

For example, the Office Action does not offer a suggestion as to how one would modify Ice with Pickles teachings. And since neither reference teaches "a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs," the

combination of the two is non-functional. This point is underscored by the fact that Pickles' teachings are drawn to terminal end blocks, which is a field divorced from printed circuit boards. So the rejection cannot be sustained based on the Office Action's conclusory statement.

v. Claims 1-14 are allowable over Ice and Pickles

Since Ice and Pickles, whether considered individually or in combination, do not show or suggest (1) "a back board including a front face and a rear face, wherein the front face is configured to connect to the front PCBs, . . . wherein the rear face of the back board is configured to connect to the rear PCBs" and (2) "a pair of connecting plates extending from the front ends of the side panels and having a distance therebetween so that the connecting plates are in close contact with outer surfaces of the side panels of the front body, and slots provided at the connecting plates into which the respective connecting members are fitted," as recited in representative independent Claim 1, Applicant submits that Claim 1 is non-obvious and therefore allowable over Ice and Pickles. And because independent Claims 7 and 11 recite elements similar to those recited in claim 1, Applicant submits that Claims 7 and 11 are likewise non-obvious and allowable over Ice and Pickles for at least the reasons articulated with respect to Claim 1.

D. Conclusion

In light of the above amendments and remarks, Applicant submits that the Examiner clearly erred in rejecting Claims 1-14 and that these claims are allowable. Thus, Applicant requests that the panel withdraw the rejections of Claims 1-14 and direct that a notice of allowance be mailed.

Respectfully submitted,

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Dated: March 22, 2010

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